BEFORE THE

PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

In Re:	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Affordable Phone Services, Incorporated d/b/a High Tech Communications	)	Docket No. 2010-14-C
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Dialtone & More Incorporated	)	Docket No. 2010-15-C
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Tennessee Telephone Service, LLC d/b/a Freedom Communications USA, LLC	)	Docket No. 2010-16-C
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. OneTone Telecom, Incorporated	)	Docket No. 2010-17-C
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. dPi Teleconnect, LLC	)	Docket No. 2010-18-C
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Image Access, Inc. d/b/a New Phone	)	Docket No. 2010-19-C

DIRECT TESTIMONY OF
CHRISTOPHER C. KLEIN, PH.D.
ON BEHALF OF
AFFORDABLE PHONE SERVICES, INCORPORATED D/B/A HIGH TECH COMMUNICATIONS
DIALTONE & MORE INCORPORATED
TENNESSEE TELEPHONE SERVICE, LLC D/B/A FREEDOM COMMUNICATIONS USA, LLC
ONETONE TELECOM, INCORPORATED
DPI TELECONNECT, LLC
AND
IMAGE ACCESS, INC. D/B/A NEW PHONE

Q. Please state your name and your current position.

A. My name is Christopher C. Klein and I am an Associate Professor in the Economics and Finance Department at Middle Tennessee State University (MTSU) in Murfreesboro, Tennessee.

Q. What is your educational background?

A. I received a B. A. in Economics from the University of Alabama in 1976 and I received a Ph. D. in Economics from the University of North Carolina at Chapel Hill in 1980.

Q. What is your professional experience involving regulated industries?

A. I was employed as an Economist in the Antitrust Division of the Bureau of Economics at the Federal Trade Commission (FTC) in Washington, D.C., for six years starting in 1980. In 1986, I was hired as the first Economist for the Tennessee Public Service Commission (TPSC). Although my title changed over the years, I functioned as the Chief Economist for the TPSC and, after 1996, the Tennessee Regulatory Authority (TRA), until August of 2002, when I assumed my current position with MTSU.

Q. What were your duties at the FTC?

A. I performed the economic analysis in antitrust investigations involving more than 20 industries and contributed to staff reports on mergers in the petroleum industry, competition in grocery retailing, and the economics of predatory or sham litigation.

Q. What was your primary responsibility at the TPSC?

A. I was an expert witness for the staff of the TPSC in rate cases and other similar proceedings involving telecommunications, natural gas, electric and water utilities, as well as motor carriers. I testified in 36 dockets before the TPSC on the issues of cost of capital, rate design, and competitive effects. I also filed testimony before the Federal Communications Commission (FCC).

Q. How did your responsibilities change when the TRA supplanted the TPSC?

A. I oversaw the Utility Rate Division and then the Economic Analysis Division. The TRA staff no longer testified in proceedings before the agency, but provided analysis and advice to the TRA Directors. I was responsible for all such advice and analysis provided to the Directors by these Divisions, either individually or in concert with other TRA staff, in all proceedings that came before the agency for resolution. These proceedings included rate cases and tariff filings by public utilities, as well as those associated with the implementation of the Federal Telecommunications Act of 1996.

Q. Were you a member of any regulatory committees or boards while you worked for the TPSC and the TRA?

A. Yes. I was a member of the National Association of Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Gas. I was a member of, and Chaired, the Research Advisory Committee to the Board of Directors of the National Regulatory Research Institute (NRRI). I also served on the State Staff of the FCC's Federal-State Joint Board in CC Docket No.80-286 (the "Separations" Joint Board) and as a Group Leader on the

NARUC Staff Subcommittee on Accounts Multi-state Audit Team that produced the 1988 Report on Bell Communications Research.

Q. **What is your primary responsibility at MTSU?**

A. I teach classes in the general area of applied microeconomics, including Principles of Microeconomics, Intermediate Microeconomic Theory, Managerial Economics, Business and Government, and Econometrics, as well as undertaking scholarly research, participating in various university committees, and serving on dissertation committees.

Q. **Have you taught at any other universities?**

A. I taught classes in the Economics of Regulation and in Antitrust Economics in the Economics Department at Vanderbilt University for several years while I was employed at the TRA.

Q. **Are you a member of any professional organizations?**

A. I am a member of the American Economic Association, the Southern Economic Association, the Western Economic Association, the Industrial Organization Society, and Alpha Pi Mu: the National Industrial Engineering Honor Society, as well as Beta Gamma Sigma: the International Honor Society for Collegiate Schools of Business.

Q. **Have you published articles in professional or academic journals and presented papers at professional meetings?**

A. More than 30 of my articles have appeared in professional or academic journals such as *Energy Economics*, *Utilities Policy*, *The Electricity Journal*, *The Journal of Applied Regulation* and many others. I have made more than 50 presentations at professional meetings.

Q. **Have you testified before any other governmental bodies in Tennessee?**

A. Yes. I have testified before various committees of the Tennessee General Assembly on regulatory issues, especially telecommunications issues and competition in the telecommunications industry, as well as before the Tennessee Advisory Commission on Intergovernmental Relations and the Tennessee Regulatory Authority. A complete list is provided in my Vita, attached.

PURPOSE OF TESTIMONY

Q. **What is the purpose of your testimony?**

A. I will comment on the appropriate resale treatment of the Cash Back, Line Connection Charge Waiver (LCCW), and Word-of-Mouth referral offerings of AT&T.

Q. **What do you recommend for the resale of these offerings?**

A. I recommend resale of these offerings at a wholesale rate equivalent to the effective retail rate less avoided cost.

BACKGROUND ON RESALE

Q. How was resale of telecommunications services established?

A. The Telecommunications Act of 1996 and the subsequent rules of the Federal Communications Commission (FCC) (47 CFR §§ 51.601-51.603) established resale of incumbent Local Exchange Carrier (ILEC) services as a method of introducing competition into the markets for retail telecommunications services. This was a special sort of competition, however. The ILECs were to make services available for resale at the retail rate less the cost that the ILECs avoided when selling services at wholesale. Resellers had to be able to make money on the resulting "margin" between the wholesale and retail rates in order to survive. Competition among successful resellers would exert pressure on this margin and on the retail rate.

Q. How were the wholesale prices to be determined?

A. The FCC rules lay out a process by which the state regulators were to determine the costs that the ILECs avoided when selling to a reseller instead of a retail customer. Subtracting these avoided costs from the ILEC's tariff rate for a service yields the wholesale rate. In practice, the states determined these avoided costs as a percentage of retail revenues and applied this "percentage discount" to each retail rate to arrive at the wholesale rate.

Q. What are the benefits of resale competition?

A. If resellers are to successfully compete with ILECs, they must offer consumers something that the ILECs do not. Since the functions avoided by the ILECs in selling to resellers involve marketing, consumer service, billing and collection, etc., the resellers would have to provide these functions at lower cost, or in higher quality than the ILECs do. If the resellers are able to do this, then consumers benefit from lower prices, or better service, or both.

Q. How could the ILECs respond to this competition?

A. They could reduce their retail rates, improve their service, or even abandon the retail market to the resellers and become pure wholesalers if they are unable or unwilling to compete with the resellers. These possibilities all create benefits for consumers. On the other hand, the ILECs might attempt to force the resellers out of business by creating a price squeeze. A successful price squeeze denies the benefits of competition to consumers.

Q. What do you mean by a price squeeze?

A. A vertical price squeeze can arise when one firm controls an essential input to the production of a final good or service that the firm also sells. This monopoly on the essential input allows the monopolist to exclude competitors by charging a price for the input that is too high to allow its competitors in the retail market to make a profit. In other words, the margin between the wholesale price for the input and the retail price for the final good or service is too low for efficient rivals to survive. Consequently, rivals either exit the retail market, or never enter it, and consumers are denied the benefits of competition.

Q. Do the FCC's rules recognize this possibility?

A. Yes. For promotions lasting more than 90 days, the FCC recognizes that such promotions could be used by ILECs to evade the wholesale rate obligation (47 CFR § 51.613(a)). These promotions can create a price squeeze by reducing the effective retail rate, but not the wholesale rate. The resellers are then "squeezed" between the wholesale price and the promotional price paid by retail customers of the ILEC. Consequently, the FCC took actions to prevent such a price squeeze and its detrimental effects on resale competition.

Q. What approach did the FCC use to try to avoid a price squeeze?

A. The FCC set up a resale system in which the wholesale rate paid by the reseller is less than the effective retail rate charged by the ILEC by the amount of avoided cost. Maintaining this wholesale margin equal to avoided cost was intended to prevent a price squeeze implemented through manipulation of the wholesale or retail rates. In the case of incentive offerings, making the offering available for resale may be sufficient to maintain the appropriate wholesale margin. Although a price squeeze could be achieved through other means, the key to preventing a price squeeze as a result of the incentive offerings at stake here is to maintain the wholesale margin at the effective retail rate less avoided cost.

“CASH BACK” OFFERINGS

Q. Why should AT&T’s “cash back” offerings be available for resale?

A. In a cash back offering, a customer requests the cash back from AT&T after being billed the retail rate for the service. If AT&T determines that the customer qualifies for the cash back offer, it mails a check, gift card, or other item to the customer depending on the details of the offering. The cash back offer functions as a rebate, rather than a direct price discount, but the potential effect on the reseller is the same. Failure to make AT&T’s “cash back” offerings available for resale creates a price squeeze for resellers.

Q. How can the cash back offer create a price squeeze?

A. AT&T’s customer pays the regular retail rate for the service less the amount of cash back. If a reseller cannot resell the offer, then the reseller buys the service at the regular retail rate less avoided cost. AT&T’s effective retail rate, however, is reduced to less than the regular retail rate by the cash back offer. Since the reseller’s wholesale rate is not reduced, a price squeeze is created. In order to sell the service in competition with AT&T, the reseller must match the cash back offer in some form, reducing the effective retail price charged by the reseller. The reseller’s revenues from the sale of the service amount to less than the wholesale margin. This is a classic price squeeze.

In equation form, let R stand for the AT&T’s regular retail rate, let A stand for avoided cost, and let C stand for the amount of cash back. Then the regular wholesale rate, W, is the regular retail rate less avoided cost, or

$$W = R – A,$$

but the effective retail rate under a cash back offering is $E_R = R – C$, the regular retail rate less the cash back amount. If AT&T does not resell the cash back offer, then the effective retail rate, $E_R = R – C$, is less than the wholesale rate of $W = R – A$. This can be shown as follows.

The difference between the effective retail rate, when cash back is not resold, and the wholesale rate can be expressed as

$$E_R – W.$$

Since we know that E_R is the same as $(R – C)$ and W is the same as $(R – A)$, we can substitute these terms for E_R and W in the expression E_R - W. This substitution gives

$$E_R – W \quad = \quad (R – C) – (R – A).$$

Simplifying this equation leads to

$$(R – C) – (R – A) \quad = \quad A – C.$$

Thus,

$$E_R – W \quad = \quad A – C.$$

That is, the difference between the effective retail rate and the wholesale rate ($E_R – W$) is less than avoided cost. This results in a price squeeze.

Q. How can a price squeeze be avoided in the case of a cash back offer?

A. Just making the cash back offer available for resale essentially prevents a price squeeze. That is, a reseller who sells a service to a customer qualifying for the cash back offer should be able to apply for and receive the cash back item from AT&T. The reseller pays AT&T the applicable retail rate less avoided cost and, for qualifying customers, less the cash back item. The effective retail rate is AT&T’s regular retail rate less the cash back item. The difference between the effective retail rate and the effective wholesale rate is just the avoided cost.

In equation form, $E_R = (R – C)$ is the effective retail rate and $E_W = (R – A – C)$ is the effective wholesale rate when cash back is resold. Subtracting the effective retail rate, E_R, from the effective wholesale rate, E_W, gives

$$E_R - E_W \quad = \quad (R - C) - (R - A - C) \quad = \quad A.$$

That is, the difference between the effective retail and wholesale rates is just the avoided cost. No price squeeze results, because the wholesale margin is maintained.

Q. Why isn't the cash back offer discounted by the wholesale discount?

A. Discounting the cash back offer will result in a wholesale margin that is less than avoided cost, essentially allowing AT&T to evade its wholesale rate obligation.

This can be shown by using a variation of the equation above. Consider the cash back offer when the offer is discounted by some fraction d, $0 < d < 1$. The effective retail rate, E_R, remains the same, but the effective wholesale rate, E_W, increases:

$$E_R = (R - C) \qquad E_W = (R - A - dC)$$

Now subtracting the effective wholesale rate from the effective retail rate gives

$$E_R - E_W \quad = \quad (R - C) - (R - A - dC) \quad = \quad A + dC - C.$$

Note that $(A + dC – C)$ is less than the avoided cost, A. Thus, discounting the cash back offer results in a wholesale margin that is less than avoided cost, causing a price squeeze.

Q. Is reselling the cash back offer at the full amount fair to AT&T?

A. Yes. AT&T's net revenue is the same whether the reseller or AT&T sells a service to a customer with a cash back offer. If AT&T sells the service with the cash back offer, its retail net revenue, N_{retail}, is the regular retail rate less the cash back amount and less the avoided cost amount, since AT&T bears these costs when it sells the service:

$$N_{retail} = R - C - A.$$

When a reseller sells a service with a cash back offer, the effective wholesale rate is the regular wholesale rate less the cash back amount. This can be expressed as

$$E_W = W - C.$$

The regular wholesale rate, W, is just the regular retail rate less avoided cost. This is expressed as W = R – A. Since W = R – A, we can substitute (R – A) for W in the equation $E_W = W - C$. This gives the effective wholesale rate

$$E_W = (R - C - A).$$

AT&T's net revenue when it sells the offer to a reseller, $N_{wholesale}$, is the wholesale price less the cash back amount, which is expressed as

$$N_{wholesale} = W - C.$$

We know that the wholesale rate is equal to the retail rate less avoided cost, W = R – A, so we can substitute (R – A) for W to get

$$N_{wholesale} = (R - A) - C.$$

Rearranging this equation gives us

$$N_{wholesale} = R - C - A.$$

Remember that N_{retail} is also equal to R – C – A, so we can substitute N_{retail} for R – C – A in the equation above to get

$$N_{wholesale} = N_{retail}$$

This shows that the net revenue for AT&T from a retail sale with cash back is equal to the net revenue AT&T receives from a wholesale sale with cash back. AT&T should be indifferent between selling a service with a cash back offer directly to a customer or indirectly through a reseller.

LINE CONNECTION CHARGE WAIVER

Q. How should the line connection charge waiver be treated for resale purposes?

A. The line connection charge covers actions taken to turn on services at new customers' premises. These are available for resale, but the appropriate wholesale rate is in question, because AT&T often waives the line connection charge for new customers. The effective retail rate appears to be zero. Nevertheless, the general rule to avoid a price squeeze is still applicable: the wholesale rate should be the effective retail rate less the avoided cost.

Q. Does this imply that the wholesale rate is less than zero?

A. In a sense, yes, it does. To see this, recall that the difference between the retail rate, R, and the wholesale rate, W = R – A, is avoided cost:

$$R - W = R - (R - A) = A.$$

In the case of the line connection charge waiver (LCCW), the effective retail rate is zero, $E_R = 0$. The effective wholesale rate should be the effective retail rate less avoided cost,

$$E_W = E_R - A.$$

But now $E_R = 0$, so the effective wholesale rate becomes the negative of avoided cost:

$$E_W = 0 - A = -A.$$

Despite this negative effective wholesale rate, the difference between the effective retail rate ($E_R = 0$) and the effective wholesale rate ($E_W = -A$) is still just the avoided cost,

$$E_R - E_W = 0 - (0 - A) = A.$$

The wholesale margin is equal to avoided cost and AT&T's wholesale rate obligation is fulfilled.

Q. What does a negative wholesale rate mean?

A. It means that AT&T credits the reseller the amount of avoided cost when the reseller signs up a customer who qualifies for the LCCW.

Q. Is this fair to AT&T?

A. Yes. AT&T is still indifferent between signing up the new customer who qualifies for the LCCW itself or having that new customer signed up by the reseller. AT&T's net revenue from signing up a new customer is just the effective retail rate less its avoided cost, or

$$N_{retail} = E_R - A.$$

If the effective retail rate is zero, $E_R = 0$, AT&T's retail net revenue is

$$N_{retail} = 0 - A = -A.$$

It is immediately obvious that this retail net revenue is the same as the effective wholesale rate, E_W, and AT&T's wholesale net revenue,

$$E_W = E_R - A = N_{wholesale}.$$

When the effective retail rate is 0, $E_R = 0$, then the wholesale net revenue is

$$N_{wholesale} = 0 - A = -A.$$

Once again AT&T's retail and wholesale net revenue are equal. Whether AT&T signs up the new customer or the reseller does makes no difference.

The appropriate wholesale rate when the line connection charge is waived is the negative of avoided cost: a payment, or credit, from AT&T to the reseller.

Q. Isn't the regular retail rate also zero?

A. No. One calculates avoided cost as the appropriate percentage discount (these vary across states) from the regular retail rate. In the case of the LCCW, the regular retail rate for line connection has not changed, so neither has the avoided cost. Only the effective retail rate in the context of the LCCW incentive has changed. The avoided cost is still positive. If AT&T were to permanently eliminate the line connection charge, only then would the avoided cost disappear.

"WORD-OF-MOUTH" REFERRAL OFFERING

Q. Why should the "word-of-mouth" referral offering be available for resale?

A. Once again, this is necessary to avoid a price squeeze.

Q. How could the word-of-mouth referral create a price squeeze?

A. First, the effect involves the customers who are eligible to register for the referral program, not for the new customers gained as a result of the referral. A customer who is eligible for the referral program expects to pay a net retail price that is lower by the amount of the expected referral benefits. Suppose an eligible customer estimates a probability, p, of receiving the referral benefit, b. The customer's expected benefit from referral is this probability of referral multiplied by the benefits from referral, or pb. The customer's effective retail rate for the service is the regular retail rate less the expected referral benefits or $E_R = (R – pb)$. If the referral cannot be resold, the wholesale rate is $W = (R – A)$. Subtracting the wholesale rate when the referral offer is not resold from the effective retail rate including the referral benefit gives

$$E_R – W \quad = \quad (R – pb) – (R – A) \quad = \quad A – pb.$$

That is, the difference in the effective retail rate and the wholesale rate is less than avoided cost, A – pb is less than A, when the referral offer is not available for resale. Not only is AT&T evading the wholesale rate obligation, but the reseller is at a disadvantage in competing for customers. The reseller should have to compete on a wholesale margin equal to avoided cost, but without being able to resell the referral program, that margin is squeezed.

Q. How can this price squeeze be avoided?

A. A price squeeze can be avoided by simply making the referral program available for resale and maintaining the wholesale margin at avoided cost. That is, the reseller makes the referral program available to its customers. When a qualifying customer refers a new customer to the reseller, the reseller collects the referral benefit from AT&T. The effective retail rate for eligible AT&T customers is

$$E_R \quad = \quad (R – pb).$$

The effective wholesale rate for the eligible customers of the reseller is

$$E_W \quad = \quad (R – A – pb).$$

The difference between the effective retail rate and the effective wholesale rate is just avoided cost:

$$E_R - E_W \quad = \quad (R - pb) - (R - A - pb) \quad = \quad A.$$

Again, the wholesale margin is equal to avoided cost and AT&T's wholesale rate obligation is fulfilled.

Q. Is this fair to AT&T?

A. Yes. AT&T should be indifferent to offering the referral program directly to its customers or indirectly to customers of the resellers. AT&T's retail net revenue under the referral program is the regular retail rate less avoided cost and less the expected referral benefit payment, pb, or

$$N_{retail} \quad = \quad R - A - pb.$$

AT&T's wholesale net revenue is the effective wholesale rate, E_W. The effective wholesale rate is the regular wholesale rate, W = R – A, less the expected referral benefit, pb, or

$$N_{wholesale} \quad = \quad E_W \quad = \quad R - A - pb.$$

The wholesale and retail net revenue for AT&T are the same.

AT&T should be indifferent to offering the referral benefit to its own customers directly or to the customers of resellers through resale. There is no difference in net revenue to AT&T.

CONCLUSION

Q. Can you summarize your recommendations?

A. Yes. For each of the offerings at issue I recommend:

1. "Cash back" offerings: The cash back offering should be made available for resale. The reseller should receive the full cash back benefit for customers who qualify for the offering.

2. LCCW: The appropriate wholesale rate is the negative of avoided cost; that is, AT&T should credit the reseller the avoided cost of line connection when the reseller's customer qualifies for the LCCW. The avoided cost for this purpose is the appropriate percentage of the regular line connection charge.

3. "Word-of-mouth" referral offerings: Referral offerings should be made available for resale to eligible customers.

Q. Does this conclude your testimony at this time?

A. Yes.

VITA

CHRISTOPHER C. KLEIN

EDUCATION:

Ph. D. (Economics), University of North Carolina - Chapel Hill (1980)
B. A. (Economics), University of Alabama - Tuscaloosa (1976)

EXPERIENCE:

2002-Present **Middle Tennessee State University**
Associate Professor of Economics

2002-Present **Consultant**
Clients include: AGL Resources, Inc.; Consumer Advocate and Protection Division, Tennessee Attorney General; Tennessee Advisory Commission on Intergovernmental Relations; Tennessee American Water Company, Inc.; Tennessee Department of Environment and Conservation; US LEC of Tennessee, Inc.; Verizon Wireless; West Virginia American Water Company, Inc.; Z-Tel Communications, Inc.

1996-2002 **Tennessee Regulatory Authority**
Chief, Economic Analysis Division, 1997-2002
Chief, Utility Rate Division, 1996-97

1998-2001 **Vanderbilt University**
Adjunct Associate Professor of Economics

1986-1996 **Tennessee Public Service Commission**
Director, Utility Rate Division, 1994-96
Economist & Research Director, 1993-94
Commission Economist, 1986-1993

1990-1994 **Middle Tennessee State University**
Adjunct Faculty, Department of Economics and Finance

1980-1986 **Federal Trade Commission**
Economist, Bureau of Economics - Antitrust Division

PROFESSIONAL ACTIVITIES:

Editor, *Journal for Economic Educators*, 2007 to present.
Member 1994-96, State Staff, Federal-State Joint Board, Federal Communications Commission CC Docket No.80-286 (“Separations” Joint Board).
Chair 1993-95, member 1990-95, Research Advisory Committee to the Board of Directors of the National Regulatory Research Institute at Ohio State University.
Member 1990-95, Staff Subcommittee on Gas, National Association of Regulatory Utility Commissioners.

Group Leader: Economics, Contracts, and Non-affiliate Revenue; NARUC* Staff Subcommittee on Accounts Multi-state Audit Team, 1988 Report on Bell Communications Research.
Referee: *Contemporary Economic Policy*, *Eastern Economic Journal*, *Land Economics*, *Review of Industrial Organization*, *Social Science Quarterly*, *Southern Economic Journal*.
Memberships: American Economic Association (AEA, since 1981), Southern Economic Association (1982), Industrial Organization Society (1986), Western Economic Association (2003).

HONORS:

Beta Gamma Sigma, International Honor Society for Collegiate Schools of Business, 2008
Top 30 Score, 2003-2004 Student Evaluation of Faculty Performance, Jones College of Business, Middle Tennessee State University.
Resolution of Recognition, National Regulatory Research Institute, 1995
Listed in various Who's Who publications since 1990
Certificate of Commendation, Federal Trade Commission,1985
First in my class to complete the Ph. D., 1980
Alpha Pi Mu, National Industrial Engineering Honorary, 1973

GRANTS RECEIVED:

MTSU Jones College Summer Research Grant: 2004, 2005, 2007.
MTSU Faculty Research and Creative Activity Academic Year Grant: 2004-2005 (with Reuben Kyle)
MTSU Faculty Research and Creative Projects Committee Summer Salary Grant: 2006, 2009.

TEACHING

At MTSU

ECON 2420, Principles of Economics – Microeconomics
ECON 3520, Intermediate Microeconomic Theory
ECON 4400, Business and Government
ECON 4570, Managerial Economics
ECON 4620, Econometrics and Forecasting
ECON 7121, Seminar in Applied Microeconomic Theory (Ph.D. Program)
ECON 7250, Methods of Outcome Assessment (Ph.D. Program)
Student Internships (ECON/FIN 4890, ECON/FIN 5890, ECON/FIN 6440)

At Vanderbilt University

ECON 252, Antitrust Economics
ECON 283, Economics of Regulation

MTSU Dissertation Committees

Shea W. Slonaker, Chair, *Three Essays on the Recorded Music Industry*, Ph. D. 2009.
Hua Liu, Member, *U.S. Trade Deficit, Productivity Growth and Offshore Outsourcing*, Ph. D. 2006.

Jennifer Wilgus, Member, *A Life-Cycle Approach to Human Capital Investment and Skill-Biased Technological Change*, Ph. D. 2005.
Anealia Sasser, *A Theoretical Examination of Title IV Financial Aid for Higher Education*, D.A. 2004.

Vanderbilt University Dissertation Committees:
Aster Adams, *The Impact of Deregulation and Competition on Efficiency, Financial Performance, and Shareholder Wealth of Electric Utilities in the United States*, Ph. D. 2009.
David B. Sapper, *Trial Selection and the Effects of Sentencing Reform in Criminal Antitrust Cases: A Theoretical and Empirical Analysis*, Ph. D. 2006.
T. Randolph Beard, *Bankruptcy, Safety Expenditure, and Safety Regulation in the Motor Carrier Industry*, Ph. D. 1988

PUBLICATIONS AND WORKING PAPERS

"The Price of Quality: Hedonic Estimation of Implicit Market Models for Higher Education," with Reuben Kyle, in revision, 2010.

"Do State Funded Merit Scholarships Induce Students to Learn More in High school?" with Elizabeth A. Perry-Sizemore, in revision, 2010.

"Identifying the Best Buys in U.S. Higher Education," with E. Anthon Eff and Reuben Kyle, submitted to *Applied Economics Research Bulletin*, August, 2010.

"What Can We Learn from Education Production Studies?" with E. Anthon Eff, forthcoming, *Eastern Economic Journal*, 2010.

"Chart Turnover and Sales in the Recorded Music Industry: 1990-2005," with Shea W. Slonaker, forthcoming, *Review of Industrial Organization*, 36(4): 351, 2010.

"Public Transportation Ridership Levels," with Christopher R. Swimmer, *Journal for Economic Educators*, 10(1): 40-46, Summer 2010.

"Analysis of U.S. Foreign Aid Determinants for 2003," with Joshua M. Hill, *Journal for Economic Educators*, 9(1): 48-52, Summer 2009.

"Intra-district Public School Funding Equity and Performance in Nashville, Tennessee," *Journal of Education Finance*, Summer 2008.

"A Tale of Three Inputs: Cost and Production Duality with Time Utilization of Capital," *Applied Economics Research Bulletin*, 1(1) 2008 (available online June 2007).

"Telephone Penetration in Tennessee: Are Intrastate Universal Service Policies Effective?" with Aster R. Adams and David B. Sapper, *Journal of Applied Regulation*, 2, November 2004, pp,. 87-108.

"A Switching Regime Approach to Measuring the Effects of Technological Change in Ocean Shipping," with J. David Bass and Reuben Kyle, *Journal of Productivity Analysis*, 22:1-2, July-September, 2004, pp. 29-49..

"The Financial Implications of Unbundling on Bell Company Profits: A Review of the Evidence," with T. Randolph

Beard and George S. Ford, *CommLaw Conspectus: The Journal of Communications Law and Policy,* v. 12 n.1, Fall/Winter 2003.

"Bell Companies as Profitable Wholesale Firms: The Financial Implications of UNE-P," with T. Randolph Beard, *Phoenix Center Policy Paper No. 17*, November 2002, www.phoenix-center.org.

"Connecting Tennessee: Bridging the Digital Divide," with Rose M. Gregory, *NRRI Quarterly Bulletin*, vol. 21 no. 3, Spring 2001.

"Regulation vs. Deregulation: It's All in the Externalities," *Tennessee's Business*, Middle Tennessee State University, v. 11, n. 3 (November), 2001.

"The Role of Public Power in a Restructured Electric Power Industry," with David Sapper, *The Electricity Journal*, August/September 2001.

"Regulator Preferences and Utility Prices: Evidence from Natural Gas Distribution Utilities," with George Sweeney, *Energy Economics*, vol. 21, n. 1, 1999.

"Competition in Telecommunications: A Progress Report for Tennessee," *Tennessee's Business*, Middle Tennessee State University, Murfreesboro, TN; vol. 9, n. 1, 1999.

"Technological Change and the Production of Ocean Shipping Services," with Reuben Kyle, *Review of Industrial Organization*, December 1997.

"The Haunting of Universal Service: Open Markets, Efficient Funding and the Ghost of the Fair Rate of Return," *Proceedings of Tenth NARUC Biennial Regulatory Information Conference*, National Regulatory Research Institute, Columbus, OH, 1996.

"Productivity Growth in Telecommunications: The Case of Tennessee," *Proceedings of Tenth NARUC Biennial Regulatory Information Conference*, National Regulatory Research Institute, Columbus, OH, 1996.

"Capture vs. Compromise: Entry Regulation of Intrastate Trucking," with Reuben Kyle and Jennifer Wilgus, *Logistics and Transportation Review*, v. 32 n. 3, September 1996.

"Price Discrimination: What is 'Undue' for a U.S. Utility?" *Utilities Policy*, vol. 4 no. 4, October 1994.

"Single Service Price Variations and 'Subsidies' in the Pricing of Telecommunications Services," *Proceedings of Ninth NARUC Biennial Regulatory Information Conference*, National Regulatory Research Institute, Columbus, OH, 1994.

"What Is Undue Price Discrimination by a Regulated Utility?" *NRRI Quarterly Bulletin*, March 1994.

"A Comparison of Cost-Based Pricing Rules for Natural Gas Distribution Utilities," *Energy Economics*, July 1993.

"Negotiating a Transportation Rate Under Threat of Bypass: A Case Study," *Proceedings of the Eighth Biennial Regulatory Information Conference*, National Regulatory Research Institute, Columbus, OH, 1992.

"A Multinomial Logit Model of Intrastate Trucking Regulation in Tennessee," with Jennifer Jose and Reuben Kyle, *Papers and Proceedings of the Nineteenth Annual Meeting of the Midsouth Academy of Economics and Finance*, v. 16 ,1992.

"Ramsey Prices for Natural Gas Distribution Utilities," *Proceedings of the Seventh NARUC Biennial Regulatory Information Conference*, National Regulatory Research Institute, Columbus, OH, 1990.

"Intervention as Entry Deterrence: Evidence from Sham Litigation Cases," *Proceedings of the Seventh NARUC Biennial Regulatory Information Conference*, National Regulatory Research Institute, Columbus, OH, 1990.

Book Review, *Changing the Rules: Technological Change, International Competition, and Regulation in Communications*, Edited by Robert W. Crandall and Kenneth Flamm, Brookings 1989; *Review of Industrial Organization*, Fall 1990.

"Double Leverage and Strategic Financing Decisions," *NRRI Quarterly Bulletin*, v. 11, n. 3, September 1990.

"Predation in the Courts: Legal Versus Economic Analysis in Sham Litigation Cases," *International Review of Law & Economics*, June 1990.

"Rate Design for Natural Gas Utilities: A Comparison of Ramsey and Cost of Service Pricing," *NRRI Quarterly Bulletin*, December 1989.

"Dissecting Divestiture: A Telecommunications Book Review Article," *Review of Industrial Organization*, October 1989.

The Economics of Sham Litigation: Theory, Cases, and Policy, Bureau of Economics Staff Report, Federal Trade Commission, April 1989.

"New Agreements, Non-affiliate Revenues, and Economic Issues," with Mike Amato and Francis Fok, in *Report on Bell Communications Research*, National Association of Regulatory Utility Commissioners, 1988.

"Merger Incentives and Cost of Capital Regulation of Subsidiaries," *Midsouth Journal of Economics and Finance*, March 1988.

"Strategic Sham Litigation: Economic Incentives in the Context of the Case Law," *International Review of Law & Economics*, December 1986.

"Is There a Principle for Defining Industries? Comment," *Southern Economic Journal*, October 1985.

"A Note on Defining Geographic Markets," with Ed Rifkin and Noel Uri, *Regional Science and Urban Economics*, February 1985.

"Process Analysis, Capital Utilization, and the Existence of Dual Cost and Production Functions," FTC Bureau of Economics Working Paper No. 116, May 1984.

"A General Theory of Hedonic Pricing of Capital as a Factor of Production," FTC Bureau of Economics Working Paper No. 105, December 1983.

"The International Market for Crude Oil," with Fred Lipson and Harvey Blumenthal, in *Mergers in the Petroleum Industry*, Federal Trade Commission, 1982.

PRESENTATIONS

"Do State Funded Merit Scholarships for Higher Education Reduce High School Dropouts?" with Elizabeth A. Perry-Sizemore, forthcoming Southern Economic Association Annual Conference, Atlanta, GA, November 2010.

"The Effect of State Funded Merit Scholarships for Higher Education on Pre-College Academic Performance," with Elizabeth A. Perry-Sizemore, Southern Economic Association Annual Conference, San Antonio, TX, November 2009.

"The Effect of State Funded Merit Scholarships for Higher Education on High School Graduation Rates," with Elizabeth A. Perry-Sizemore, Southern Economic Association Annual Conference, Washington, DC, November 2008.

"Identifying the Best Buys in U.S. Higher Education," with E. Anthon Eff and Reuben Kyle, Southern Economic Association Annual Conference, Washington, DC, November 2008.

"Product Variety and Sales in the Recorded Music Industry: 1990-2005," with Shea Slonaker, International Industrial Organization Conference, Arlington, VA, May 2008.

"Identifying the Best Buys in U.S. Higher Education," with E. Anthon Eff and Reuben Kyle, Academy of Economics and Finance Annual Meeting, Nashville, TN, February 2008.

"Product Variety and Sales in the Recorded Music Industry: 1990-2005," with Shea Slonaker, Academy of Economics and Finance Annual Meeting, Nashville, TN, February 2008.

"Do State Funded Merit Scholarships Induce Students to Learn more in High school?" with Elizabeth A. Perry-Sizemore, Southern Economic Association Annual Conference, New Orleans, LA, November 2007.

"The Price of Quality: Hedonic Estimation of Implicit Market Models for Higher Education," with Reuben Kyle, Southern Economic Association Annual Conference, New Orleans, LA, November 2007.

"The Shifting Appeal of Sham Litigation: Evidence from Appellate Decisions 1971-2006," International Industrial Organization Conference, Savannah, GA, April 2007.

"The Shifting Appeal of Sham Litigation: Evidence from Appellate Decisions 1980-2006," Scholar's Week Poster Fair, MTSU, April 2007

"Causality Tests for Public School Funding and Performance," Southern Economic Association Meeting, Charleston, SC, November 2006.

"The Price of Quality: Hedonic Estimation of Implicit Market Models for Higher Education," with Reuben Kyle, Southern Economic Association Meeting, Washington, November 2005.

"The Price of Quality: Hedonic Estimation of Implicit Market Models for Higher Education," with Reuben Kyle, International Industrial Organization Conference, Atlanta, April 2005.

"Anticompetitive Litigation and the "Baselessness" Standard for Antitrust Liability," Southern Economic Association Meeting, New Orleans, November 2004.

"The Price of Quality: Hedonic Estimation of Implicit Market Models for Higher Education," with Reuben Kyle, Southern Economic Association Meeting, New Orleans, November 2004.

"VoIP: Let's Ask the Right Questions," Tennessee Regulatory Authority Forum on VoIP, Nashville Public Library, April 30, 2004.

"Telephone Penetration in Tennessee: Are Intrastate Universal Service Policies Effective?" with Aster Rutibablira and David B. Sapper, Southern Economic Association Meeting, San Antonio, TX, November 2003.

"Telephone Penetration in Tennessee: Are Intrastate Universal Service Policies Effective?" with Aster Rutibablira and David B. Sapper, International Industrial Organization Conference, Boston MA, April 4-5, 2003.

"A Critique of Educational Production Functions," Southern Economic Association meeting, New Orleans, LA, November 2002.

"Connecting Tennessee: Bridging the Digital Divide," with Rose M. Gregory, American Economic Association meeting, joint session with the Transportation and Public Utilities Group, Atlanta, GA, January 2002.

"Long Term Contracts as Anticompetitive Devices in Telecommunications," Southern Economic Association Annual Meeting, Tampa, FL, November 2001.

"The Role of Public Power in a Restructured Electric Power Industry," American Economic Association meeting, joint session with the Transportation and Public Utilities Group, Boston, MA, January 2000.

"Universal Telephone Service in Tennessee: A Pre-Competition Assessment," with David Sapper, Southern Economic Association meeting, New Orleans, LA, November 1999.

“Trucks, Planes, Trains, and Wires? Short-haul vs. Long-haul Long Distance Rates in Telecommunications,” with Reuben Kyle, Southern Economic Association meeting, Baltimore, MD, November 1998.

“The Economics of Time as a Resource,” Southern Economic Association meeting, Atlanta, GA, November 1997.

“Cost and Production Duality with Capital Utilization,” Department of Economics Seminar Series, Vanderbilt University, February 1997.

“Maximum Impropriety: The ‘Baselessness’ Standard for Improper Litigation,” Southern Economic Association meeting, Washington, November 1996.

“Cost and Production Duality with Capital Utilization,” Southern Economic Association meeting, Washington, November 1996.

"The Haunting of Universal Service: Open Markets, Efficient Pricing, and the Ghost of the Fair Rate of Return,” Tenth NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1996.

"Productivity Growth in Telecommunications: The Case of Tennessee," Tenth NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1996.

"Productivity Growth in Telecommunications: The Case of Tennessee," Advanced Workshop in Regulation and Public Utility Economics, 15th Annual Conference, Lake George, NY, May 1996.

"A Switching Regime Approach to Measuring the Effects of Technological Change in Ocean Shipping," with Reuben Kyle, Southern Economic Association meeting, New Orleans, November 1995.

"Productivity Growth in Telecommunications: The Case of Tennessee," Southern Economic Association meeting, New Orleans, November 1995.

"Local Service Price Variations and 'Subsidies' in Telecommunications," Southern Economic Association meeting, Orlando, November 1994.

"Dynamic Effects of Regulatory Policy on Intrastate Long Distance Telephone Rates," Southern Economic Association meeting, Orlando, November 1994.

"Single Service Price Variations and 'Subsidies' in the Pricing of Telecommunications Services," Ninth NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1994.

"Suit, Countersuit, and Settlement in Sham Litigation," Annual Meeting of the Midsouth Academy of Economics and Finance, Nashville, February 1994.

"New Evidence on the Effect of Regulation on Intrastate Long Distance Telephone Rates," Annual Meeting of the Midsouth Academy of Economics and Finance, Nashville, February 1994.

"What is Undue Price Discrimination for a Public Utility?" Southern Economic Association meeting, New Orleans, November 1993.

"Regulated Utility Prices and the Preferences of Regulators," with George Sweeney, Southern Economic Association meeting, New Orleans, November 1993.

"A Test for Strategic Behavior Under Rate of Return Regulation," Southern Economic Association meeting, Washington, November 1992.

"New Evidence on the Effect of Regulatory Policy on Intrastate Long Distance Telephone Rates," Southern Economic Association meeting, Washington, November 1992.

"Technological Change and the Production of Ocean Shipping Services," with Reuben Kyle, Atlantic Economic Association meeting, Plymouth, MA, October 1992.

"Negotiating a Transportation Rate Under Threat of Bypass: A Case Study," Eighth Biennial Regulatory Information Conference, Columbus, OH, September 1992.

"A Multinomial Logit Model of Intrastate Trucking Regulation in Tennessee," with Jennifer W. Jose and Reuben Kyle, Midsouth Academy of Economics and Finance annual meeting, Mobile, February 1992.

"Technological Change and the Production of Ocean Shipping Services," with Reuben Kyle, Southern Economic Association meeting, Nashville, November 1991.

"Suit, Countersuit, and Settlement in Sham Litigation Cases," Southern Economic Association meeting, Nashville, November 1991.

"Implementing Third Best Pricing Rules for Natural Gas Distribution Utilities," Southern Economic Association meeting, Nashville, November 1991.

"Trucking Regulation in Tennessee," with Jennifer Jose and Reuben Kyle, Southern Economic Association meeting, Nashville, November 1991.

"Research and Development in Regulated Markets: The Case of Bell Communications Research," Southern Economic Association meeting, New Orleans, November 1990.

"Incentives for Trial and Settlement in Sham Litigation," Southern Economic Association meeting, New Orleans, November 1990.

"Ramsey Prices for Natural Gas Distribution Utilities," Seventh NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1990.

"Intervention as Entry Deterrence: Evidence from Sham Litigation Cases," Seventh NARUC Biennial Regulatory Information Conference, Columbus, OH, September 1990.

"Funding Research and Development in Regulated Industries: The Case of Bell Communications Research," Ninth Annual Conference of the Advanced Workshop in Regulation and Public Utility Economics, New Paltz, NY, May 30 - June 1, 1990.

"Incentives for Trial and Settlement in Sham Litigation," Bureau of Economics Seminar, Federal Trade Commission, February 1990.

"Estimating Ramsey Prices for Natural Gas Utilities," Southern Economic Association meeting, Orlando, November 1989.

"Incentives for Trial and Settlement in Sham Litigation," Department of Economics Seminar Series, Auburn University, November 1989.

"Natural Gas Rate-Making: Now and In the Future," Associated Valley Industries Natural Gas Seminar, Nashville, October 1989.

"Estimating Ramsey Prices for Natural Gas Utilities," Advanced Workshop in Regulation and Public Utility Economics, Eighth Annual Conference, Newport, RI, May 29-31, 1989.

"The Role of Bell Communications Research in the Telecommunications Markets," Midsouth Academy of Economics and Finance Annual Conference, Nashville, February 1989.

"The Organizational Structures of Public Utilities Under Different Regulatory Regimes," Southern Economic Association meeting, San Antonio, November 1988.

"New Agreements, Non-affiliate Revenues, and Economic Issues," Report on Bell Communications Research, NARUC Multi-state Audit Team, presented to NARUC Staff Sub-committee on Accounts, Kalispell, Montana, September 1988.

"Predation in the Courts: Empirical Analysis of Sham Litigation Cases," Joint Session of the Industrial Organization Society and the American Economic Association, Chicago, December 1987.

"Rate of Return on Equity," National Conference on Unit Valuation Standards, Nashville, December 1987.

"Merger Incentives and Organizational Structures Under Cost of Capital Regulation," Southern Economic Association meeting, Washington, November 1987.

"Merger Incentives and Cost of Capital Regulation of Subsidiaries," Midsouth Academy of Economics and Finance Annual Conference, Mobile, February 1987.

"The Incidence of Predatory Sham Litigation," Southern Economic Association meeting, New Orleans, November 1986.

"A Welfare Analysis of the Department of Justice Merger Guidelines," Southern Economic Association meeting, Dallas, November 1985.

"A Duality Approach to Labor Costs and Shiftwork," Southern Economic Association meeting, Atlanta, November 1984.

"Strategic Sham Litigation: Economic Incentives in the Context of the Case Law," Southern Economic Association meeting, Atlanta, November 1984.

"A General Theory of Hedonic Pricing of Capital as a Factor of Production," Southern Economic Association meeting, Washington, November 1983.

ECONOMIC TESTIMONY

In the United States District Court for the Middle District of Tennessee: Owner-Operator Independent Drivers Association Inc. v. Keith Bissell, No. 3-90-0251, March 1992, (Affidavit).

Before the Federal Communications Commission: Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Companies, CC Docket No. 89-624, March 1990.

Before the Tennessee General Assembly: various Committees, 1994 - present.

Before the Tennessee Advisory Commission on Intergovernmental relations:
"Report on Pole Attachment Rate Study," with Reuben Kyle, January 18, 2007.

Before the Tennessee Regulatory Authority:

Petition of Chattanooga Gas Company for General Rate Increase, Implementation of the EnergySmart Conservation Programs, and Implementation of a Revenue Decoupling Mechanism, (09-00183), April 2010.

Petition of Piedmont Natural Gas Company, Inc. to Implement a Margin Decoupling Tracker (MDT) and Related Energy Efficiency and Conservation Programs, (09-00104), December 2009.

Tennessee Rural Coalition Petition for Suspension and Modification Pursuant to 47 U.S.C. 1251(f)(2), (06-00228), May 2007.

Complaint of US LEC of Tennessee, Inc. against Electric Power Board of Chattanooga (02-00562), Feb. 2004.

Before the Tennessee Public Service Commission (docket numbers in parentheses):
BellSouth D/B/A South Central Bell (95-02614) October 1995.
United Telephone - Southeast (95-02615) September 1995.
United Telephone - Southeast (93-04818) January 1994.
Chattanooga Gas Company (93-06946) December 1993.
South Central Bell Tariff 93-039 (93-03038) May 1993.
South Central Bell (92-13527, et al) April 1993.
Kingsport Power Co. (92-04425) October 1992.
United Cities Gas Co.(92-02987) Sept. 1992.
L & L Trucking, Inc. (91-06786) February 1992.
Chattanooga Gas Company (91-03765) October 1991.
GTE South (91-05738) August 1991.
Nashville Gas Company (91-02636) August 1991.
Intra-LATA "Competition" (89-11065, et al) Feb. 1991.
United Intermountain Tel. Co.(90-07832) Dec. 1990.
Kingsport Power Company (90-05736) Nov. 1990.
AT&T - South Central States (90-07460) Oct. 1990.
L & L Trucking (90-03514; 90-04786) August 1990.
South Central Bell Tel. Co. (90-05953) August 1990.
GTE South (90-01273) June 1990.
Radio Common Carriers (89-11234) Nov. 1989.
Nashville Gas Co. (89-10491) Oct. 1989.
United Cities Gas Co. (89-10017) Sept. 1989.
Crockett Telephone Co. (89-02325) May 1989.
ALLTEL Tennessee (89-02324) May 1989.
West Tennessee Telephone Co. (89-02323) May 1989.
Peoples Telephone Co. (89-02322) May 1989.
Ooltewah-Collegedale Telephone Co. (89-02321) May 1989.
Kingsport Power Co. (89-02126) March 1989.**
Chattanooga Gas Co. (88-01363) February 1989.**
Tennessee-American Water Co. (U-87-7534) March 1988.

Tellico Telephone Co. (U-87-7532) February 1988.
Claiborne Telephone Co. (U-87-7508) November 1987.**
Nashville Gas Co. (U-87-7499) October 1987.**
Kingsport Power Co. (U-86-7472) May 1987.**
United Cities Gas Co. (U-86-7442) February 1987.**
General Telephone of the South (U-86-7437) Nov. 1986.**

BEFORE

THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NOS. 2010-14--19-C

IN RE:	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Affordable Phone Services, Incorporated d/b/a High Tech Communications	)	
Docket No. 2010-14-C	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Dialtone & More Incorporated	)	
Docket No. 2010-15-C	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Tennessee Telephone Service, LLC d/b/a Freedom Communications USA, LLC	)	**CERTIFICATE OF SERVICE**
Docket No. 2010-16-C	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. OneTone Telecom, Incorporated	)	
Docket No. 2010-17-C	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. dPi Teleconnect, LLC	)	
Docket No. 2010-18-C	)	
	)	
BellSouth Telecommunications, Incorporated d/b/a AT&T Southeast d/b/a AT&T South Carolina v. Image Access, Incorporated d/b/a New Phone	)	
Docket No. 2010-19-C	)	

The undersigned hereby certifies that a copy of the **Direct Testimony of Christopher C. Klein, PH.D.** has been served by electronic mail service on the following this 27th day of August, 2010:

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s/ John J. Pringle, Jr.
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